

1116-S1-1186 **Eric Sullivan*** (esullivan@carroll.edu), Carroll College, 1601 N. Benton Ave., Helena, MT 59625. *Modeling First - Techniques Just In Time.*

The field of differential equations is rich with opportunities for mathematical modeling, but many students leave differential equations courses thinking of the whole field as nothing but a collection of techniques. In this presentation we will discuss the use of modeling scenarios as motivation for learning several traditional analytic solution techniques. Furthermore, the modeling scenarios serve as motivation to learn more advanced techniques such as sensitivity analysis and parameter fitting. Several of our modeling scenarios will be presented along with sample student work and an open discussion of teaching with a modeling-first approach. (Received September 17, 2015)